AMENDMENT AND PRESENTATION OF CLAIMS

Please replace all prior claims in the present application with the following claims.

1. (Currently Amended) A method for testing a time delay error ratio ER of a device against a maximal allowable time delay error ratio ER_{limit} with an early pass criterion, whereby the early pass criterion is allowed to be wrong only by a ~~small~~ first probability D_1, comprising the following steps:

measuring ns time delays (TD) of the device, thereby detecting ne bad time delays, which exceed a certain time limit, of these ns time delays (TD),

estimating a likelihood distribution giving a distribution of a number ni of bad time delays in a fixed number of samples of time delays (TD) as $PD(ni, NE)$, wherein NE is the average number of bad time delays,

obtaining PD_{high} from $D_1 = {}_0\int^{ne} PD_{high}\,(ni, NE_{high})\; dni$, wherein PD_{high} is the worst possible likelihood distribution containing the measured ne bad time delays with the probability D_1,

obtaining the average number NE_{high} of bad time delays for the worst possible likelihood distribution PD_{high},

comparing NE_{high} with $NE_{limit} = ER_{limit} \cdot ns$,

if NE_{limit} is higher than NE_{high} stopping the test and deciding that the device has early passed the test and

if NE_{limit} is smaller than NE_{high} continuing the test whereby increasing ns.

2. (Currently Amended) A method for testing a time delay error ratio ER of a device against a maximal allowable time delay error ratio ER_{limit} with an early pass criterion, whereby the early pass criterion is allowed to be wrong only by a ~~small~~ first probability ~~D_1~~ F_1 for the entire test, comprising the following steps:

measuring ns time delays (TD) of the device, thereby detecting ne bad time delays, which exceed a certain time limit, of these ns time delays (TD),

estimating a likelihood distribution giving a distribution of a number ni of bad time delays in a fixed number of samples of time delays (TD) as $PD(ni, NE)$, wherein NE is the average number of bad time delays,

obtaining PD_{high} from $D_1 = {}_0\int^{ne} PD_{high}\,(ni, NE_{high})\,dni$, wherein PD_{high} is the worst possible likelihood distribution containing the measured ne bad time delays with a single step wrong decision probability D_1 for a preliminary error ratio ER stage, whereby using a single step wrong decision probability D_1 smaller than the probability F_1 for the entire test,

obtaining the average number of NE_{high} of bad time delays for the worst possible likelihood distribution PD_{high},

comparing NE_{high} with $NE_{limit} = ER_{limit} \cdot ns$,

if NE_{limit} is higher than NE_{high} stopping the test and deciding that the device has early passed the test and

if NE_{limit} is smaller than NE_{high} continuing the test whereby increasing ns.

3. (Currently Amended) A method according to claim [[1]] 2, wherein the single step wrong decision probability D_1 is in the range of $F_1 > D_1 \geq 1 - (1 - F_1)^{1/ne}$.

4. (Previously Presented) A method according to claim 1, wherein the likelihood distribution PD_{high} (ni, NE) is a Poisson distribution.

5. (Previously Presented) A method according to claim 1, wherein the likelihood distribution PD_{high} (ni, NE) is a binomial distribution.

6. (Previously Presented) A method according to claim 1, wherein, for avoiding an undefined situation for $ne = 0$ starting the test with an artificial bad time delay $ne = 1$, not incrementing ne when a first error occurs.

7. (Currently Amended) A method for testing a time delay error ratio ER of a device against a maximal allowable time delay error ratio ER_{limit} with an early fail criterion, whereby the early fail criterion is allowed to be wrong only by a ~~small~~ first probability D_2, comprising the following steps:

measuring ns time delays (TD) of the device, thereby detecting ne bad time delays, which exceed a certain time limit, of these ns time delays (TD),

estimating a likelihood distribution giving a distribution of a number ni of bad time delays in a fixed number of samples of time delays (TD) as $PD(ni, NE)$, wherein NE is the average number of bad time delays,

obtaining PD_{low} from $D_2 = {}_0\int^{ne} PD_{low}\,(ni, NE_{low})\, dni$, wherein PD_{low} is the best possible likelihood distribution containing the measured ne bad time delays with the probability D_2,

obtaining the average number NE_{low} of bad time delays for the best possible likelihood distribution PD_{low},

comparing NE_{low} with $NE_{limit} = ER_{limit} \cdot ns$,

if NE_{limit} is smaller than NE_{low} stopping the test and deciding that the device has early passed the test and

if NE_{limit} is higher than NE_{low} continuing the test whereby increasing ns.

8. (Currently Amended) A method for testing a time delay error ratio ER of a device against a maximal allowable time delay error ratio ER_{limit} with an early fail criterion, whereby the early fail criterion is allowed to be wrong only by a ~~small~~ first probability F_2 for the entire test, comprising the following steps:

measuring ns time delays (TD) of the device, thereby detecting ne bad time delays, which exceed a certain time limit, of these ns time delays (TD),

estimating a likelihood distribution giving a distribution of a number ni of bad time delays in a fixed number of samples of time delays (TD) as $PD(ni, NE)$, wherein NE is the average number of bad time delays,

obtaining PD_{low} from $D_2 = {}_{ne}\int^{\infty} PD_{low}\,(ni, NE_{low})\, dni$, wherein PD_{low} is the best possible likelihood distribution containing the measured ne bad time delays with a single step wrong decision probability D_2 for a preliminary error ratio ER stage, whereby using a single step wrong decision probability D_2 smaller than the probability F_2 for the entire test,

obtaining the average number of NE_{low} of bad time delays for the best possible likelihood distribution PD_{low},

comparing NE_{low} with $NE_{limit} = ER_{limit} \cdot ns$,

if NE_{limit} is smaller than NE_{low} stopping the test and deciding that the device has early passed the test and

if NE_{limit} is higher than NE_{low} continuing the test whereby increasing ns.

9. (Previously Presented) A method according to claim 8, wherein the single step wrong decision probability D_2 is in the range of $F_2 > D_2 \geq 1 - (1 - F_2)^{1/ne}$.

10. (Previously Presented) A method according to claim 7, wherein the likelihood distribution PD_{low} (ni, NE) is a Poisson distribution.

11. (Previously Presented) A method according to claim 7, wherein the likelihood distribution PD_{low} (ni, NE) is a binomial distribution.

12. (Currently Amended) A method according to claim 7, wherein for avoiding a undefined situation for $ne < k$, wherein k is a ~~small~~ number of bad time delays, not stopping the test as long as *ne* is smaller than k.

13. (Currently Amended) A method according to claim 7, characterized by an additional early pass criterion, whereby the early pass criterion is allowed to be wrong only by a ~~small~~ <u>first</u> probability D_1, further comprising:

estimating a likelihood distribution giving a distribution of a number of bad time delays *ni* in a fixed number of samples of time delays (TD) as $PD(ni, NE)$, wherein *NE* is the average number of bad time delays,

obtaining PD_{high} from $D_1 = {}_0\int^{ne} PD_{high}\,(ni, NE_{high})\, dni$, wherein PD_{high} is the worst possible likelihood distribution containing the measured *ne* bad time delays with the probability D_1,

obtaining the average number NE_{high} of bad time delays for the worst possible likelihood distribution PD_{high},

comparing NE_{high} with $NE_{limit} = ER_{limit} \cdot ns$,

if NE_{limit} is higher than NE_{high} stopping the test and deciding that the device has early passed the test and

if NE_{limit} is smaller than NE_{high} continuing the test, whereby increasing ns.

14. (Currently Amended) A method according to claim 7, characterized by an additional early pass criterion, whereby the early pass criterion is allowed to be wrong only by a ~~small~~ first probability D_1, further comprising:

estimating a likelihood distribution giving a distribution of the number of bad time delays ni in a fixed number of samples of time delays (TD) is $PD(ni, NE)$, wherein NE is the average number of bad time delays,

obtaining PD_{high} from $D_1 = {}_0\int^{ne} PD_{high}\,(ni, NE_{high})\, dni$, wherein PD_{high} is the worst possible likelihood distribution containing the measured ne bad time delays with the probability D_1,

obtaining the average number NE_{high} of bad time delays for the worst possible likelihood distribution PD_{high},

comparing NE_{high} with $NE_{limit,M} = ER_{limit} \cdot M \cdot ns$, where M is a variable with $M > 1$,

if $NE_{limit,M}$ is higher than NE_{high} stopping the test and deciding that the device has early passed the test and

if $NE_{limit,M}$ is smaller than NE_{high} continuing the test, whereby increasing ns.

15. (Previously Presented) A method according to claim 13, wherein the probability D_1 for the wrong early pass criterion and the probability D_2 for the wrong early fail criterion are equal ($D_1 = D_2$).

16. (Currently Amended) A method according to claim 7, characterized by an additional early pass criterion, whereby the early pass criterion is allowed to be wrong only by a ~~small~~ first probability F_1 for the entire test, further comprising:

estimating a likelihood distribution giving a distribution of the number of bad time delays ni in a fixed number of samples of time delays (TD) as $PD(ni, NE)$, wherein NE is the average number of bad time delays,

obtaining PD_{high} from $D_1 = {}_0\int^{ne} PD_{high}\,(ni, NE_{high})\,dni$ wherein PD_{high} is the worst possible likelihood distribution containing the measured ne bad time delays with a single step wrong decision probability D_1 for a preliminary error ratio ER stage, whereby using a single step wrong decision probability D_1 smaller than the probability F_1 for the entire test,

obtaining the average number of NE_{high} of bad time delays for the worst possible likelihood distribution PD_{high},

comparing NE_{high} with $NE_{limit} = ER_{limit} \cdot ns$,

if NE_{limit} is higher than NE_{high} stopping the test and deciding that the device has early passed the test and

if NE_{limit} is smaller than NE_{high} continuing the test, whereby increasing ns.

17. (Currently Amended) A method according to claim 7, characterized by an additional early pass criterion, whereby the early pass criterion is allowed to be wrong only by a ~~small~~ first probability F_1 for the entire test, further comprising:

estimating a likelihood distribution giving a distribution of the number of bad time delays ni in a fixed number of samples of time delays (TD) is $PD(ni, NE)$, wherein NE is the average number of bad time delays,

obtaining PD_{high} from $D_1 = {}_0\int^{ne} PD_{high}\,(ni, NE_{high})\,dni$, wherein PD_{high} is the worst possible likelihood distribution containing the measured ne bad time delays with a single step wrong decision probability D_1 for a preliminary error ratio ER stage, whereby using a single step wrong decision probability D_1 smaller than the probability F_1 for the entire test,

obtaining the average number NE_{high} of bad time delays for the worst possible likelihood distribution PD_{high},

comparing NE_{high} with $NE_{limit,M} = ER_{limit} \cdot M \cdot ns$, <u>where M is a variable</u> with $M > 1$,

if $NE_{limit,M}$ is higher than NE_{high} stopping the test and deciding that the device has early passed the test and

if $NE_{limit,M}$ is smaller than NE_{high} continuing the test, whereby increasing ns.

18. (Previously Presented) A method according to claim 16, wherein the probability F_1 for the wrong early pass criterion and the probability F_2 for the wrong early fail criterion are equal ($F_1 = F_2$).

19. (Currently Amended) A method according to claim 7, ~~whreein~~ <u>wherein</u> for avoiding a undefined situation for $ne = 0$ starting the test with an artificial bad time delay $ne = 1$ not incrementing ne when a first error occurs.

20. (Previously Presented) A digital storage medium with control signals electronically readable from the digital storage medium, which interact with a programmable computer or digital signal processor in a manner that all steps of the method according to claim 1 can be performed.

21. (Previously Presented) A computer-program-product with program-code-means stored on a machine-readable data carrier to perform all steps of claim 1, when the program is performed on a programmable computer or a digital signal processor.

22. (Currently Amended) A ~~computer program with program-code-means to perform all steps of claim 1, when the program is performed on a programmable computer or a digital signal processor~~ digital storage medium with control signals electronically readable from the digital storage medium, which interact with a programmable computer or digital signal processor in a manner that all steps of the method according to claim 7 can be performed.

23. (Currently Amended) A ~~computer program with program-code-means to perform all steps of claim 1 when the program is stored on a machine-readable data carrier~~ computer-program-product with program-code-means stored on a machine-readable data carrier to perform all steps of claim 7, when the program is performed on a programmable computer or a digital signal processor.